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generating the subscriber profile by applying the heuristic rules to the interaction traits.--

### Remarks

#### *Status*

The Examiner rejected claims 52-82 (all of the pending claims). Claims 83-99 have been added. It is submitted that all of the claims (52-99) are patentable over the cited references for at least the reasons discussed below.

#### *Discussion*

The Examiner rejected claims 52-82 under 35 U.S.C. §102 (a) and (c) as being anticipated by *Williams et al.* (U.S.P. 5,977,964). Initially, the Applicant points out that *Williams et al.* '964 is not a valid 102(a) reference as the patent was not issued until November 2, 1999 (known, used, patented or published) almost a year after the current application was filed (effective invention date) on December 3, 1998. Moreover, it is well settled that a reference may anticipate a claim within the purview of 35 U.S.C. §102 only if all the features and all the relationships recited in the claim are taught by the reference either by clear disclosure or under the principle of inherency (i.e., *W.L. Gore & Assocs. V. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303, 313 (Fed. Cir. 1983); *Carella v. Starlight Archery*, 804 F.2d 135, 138, 231 USPQ 644, 646 (Fed. Cir.); *RCA Corp. v. Applied Digital Data Sys., Inc.*, 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir. 1984); and *Lindermann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1984)). Applicant submits that *Williams et al.* '964 clearly do not teach (or suggest) all of the features and relationships recited in the claims as required for a prima facie case of anticipation under 35 U.S.C. §102. Accordingly, the rejections are respectfully traversed.

Independent claim 52 is directed to a method for generating a subscriber profile. The method includes processing subscriber interactions to generate viewing characteristics that identify viewing traits associated with the subscriber. *Heuristic rules associated with the viewing*

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*characteristics are retrieved, wherein the heuristic rules predict traits about the subscriber not related to the viewing characteristics. The subscriber profile is generated by applying the heuristic rules to the viewing characteristics.* The applicant submits that *Williams et al. '964* do not teach (or suggest) the retrieval of heuristic rules that are associated with viewing characteristics and that predict traits about the subscriber not related to the viewing characteristics, or the generation of a subscriber profile based on application of heuristic rules to viewing characteristics, as required by claim 52.

As defined in the application, the heuristic rules may be logical rules or may be rules expressed in terms of conditional probabilities (page 11, lines 27-29). Fig 10A and the associated text from page 21, line 26 – page 22, line 15 illustrate and describe exemplary logical heuristic rules. For example, the heuristic rules equate an individual watching the soap opera "Days of our lives" with a housewife (1050). The heuristic rules also equate higher frequency of channel changes to higher income, as illustrated a user who zaps once every 2 minutes and 42 seconds is associated with an income of greater than \$75,000 (1010). Fig. 10B and the associated text from page 22, line 16 – page 22, line 24 illustrate and describe exemplary probabilistic heuristic rules. The exemplary heuristic rules define probabilities of demographic make-up of a user based on the category of programming they are viewing. For example, the heuristic rules assign an individual watching the news a 40% probability of being over the age of 70, a 40% probability of making between \$50K - \$100K, a 50% of being a single member family, and a 70% chance of being female. It is clear that the exemplary heuristic rules described in the application are related to viewing characteristics (i.e., watching soap opera, watching the news) and predict traits that are not related thereto (i.e., housewife, 40% probability of income between \$50K - \$100K).

On page 2 of the Office Action, the Examiner asserts that "The claimed 'retrieving heuristic rules associated with the viewing characteristics, wherein the heuristic rules predict traits about the subscriber not related to viewing characteristics and generating the subscriber profile by applying the heuristic rules top the vewing characteristics' merely read on the fact that in the method of Williams, a user profile database tracks user preferred channels and determine whcther a viewer is a child or an adult and restricts advertisements to toys and cereals for a child

and automobiles and appliances for an adult (see column 5, lines 60-65, column 6, lines 40-45)". The Applicant respectfully submits that the Examiners assertion is clearly erroneous.

From the above assertion it would appear that the Examiner contends that the retrieval and application of heuristic rules having all the features and relationships recited in claim 52 is disclosed in the noted passages of *Williams et al.* '964. Initially the Applicant reminds the Examiner that a reference may anticipate a claim within the purview of 35 U.S.C. §102 only if all the features and all the relationships recited in the claim are taught by the reference either by *clear disclosure* or under the principle of inherency. However, the col. 5 passage referred to by the Examiner simply identifies the existence of a profile database 800 capturing user preferences such as preferred channel, volume, program genre ... (i.e., viewing characteristics). The col. 6 passage simply discloses that if the system determines the user (1) is a child it may restrict ads to cereal and toys; (2) is an adult may promote ads for autos and appliances. This passage does not give any indication as to how the child/adult determination is made, and in particular does not disclose that the determination is made by applying heuristic rules to the profile database 800 (viewing characteristics) as appears to be suggested by the Examiner.

In fact, there is no disclosure in any portion of the *Williams et al.* '964 reference of heuristic rules associating viewing characteristics to non-viewing characteristics being retrieved, let alone being applied to the viewing characteristics in order to generate a subscriber profile, as required by claim 52. For at least the above noted reasons, the Applicant submits that *Williams et al.* '964 do not teach all elements and all relationships of claim 52 by clear disclosure. Thus, the Examiner has clearly not proven a prima facie case of anticipation by clear disclosure of all the elements and all the relationships recited in the claim.

The Examiner continues that "Clearly, some heuristic rules associated with the viewing characteristics are being retrieved and applied to the viewing characteristics in order to determine whether a viewer is a child or an adult. Furthermore, the rules clearly predict traits not related to the viewing characteristics about a subscriber since the method predicts that a child would like toys and cereals and an adult would like cars and appliances." The Applicant respectfully submits that the Examiners assertion is clearly erroneous.

From the above assertion it would appear that the Examiner contends that the retrieval and application of heuristic rules having all the features and relationships recited in claim 52 are

inherent in *Williams et al. '964*. A reference may anticipate a claim within the purview of 35 U.S.C. §102 only if all the features and all the relationships recited in the claim are taught by the reference either by clear disclosure or *under the principle of inherency*. It is a well settled principle that for an element or relationship to be inherent that it must necessarily be present in the thing described in the reference and that it would be so recognized by persons of ordinary skill (i.e., *Continental Can Co. USA v. Monsanto Co.*, 948 F.2d 1264, 20 USPQ 2d 1749 (Fed. Cir. 1991); *In re Sun*, 31 USPQ 2d 1451, 1453 (Fed Cir. 1993)). Inherency may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient (i.e., *In re Oelrich*, 666 F.2d 578, 581, 212 USPQ 323, 326 (C.C.P.A. 1981)).

Thus, while it is possible that a set of heuristic rules associated with viewing characteristics and predicting traits not related to the viewing characteristics could be retrieved and applied in the system of *Williams et al. '964*, that is *but one possibility* and is clearly *not necessarily present* in the invention as asserted by the Examiner. For example, another possibility is that the system knows who each of the users are. Thus, once the system determines which user is currently interacting with the system the system also knows specifics about the current user including whether the current user is an adult or child. With this possibility there would be no need what so ever for the use of heuristic rules to determine whether the user was an adult or child as the Examiner appears to assert must be inherent in the *Williams et al. '964* system. In fact, the users being known is not merely a possibility it is actually disclosed in *Williams et al. '964*. For example, "system controller 104 determines which user of a plurality of *known* system users is currently using system 100" (col. 5., lines 35-38 emphasis added) and "calculates a user metric for the information in the behavior log and the current system settings as well as for each of the *known* system users" (col. 9, lines 51-54 emphasis added).

In an interview conducted with the Examiner on August 6, 2001, the Examiner pointed to col. 9, lines 10-17 where it is stated that "until system controller 104 detects a new user, step 220" as proof that the users need not be known. Initially, the Applicant points out that even assuming arguendo that the Examiner is correct that the user need not be known, the Applicant has clearly established that the user being known is certainly a possibility. As such, there is clearly no rational support for the Examiner's assertion that heuristic rules are inherent in *Williams et*

*al.* '964. Moreover, the passage cited by the Examiner does not teach that the system calculates attributes (i.e., distinguishes the user as an adult or child) about a new (non-known) user as suggested by the Examiner. Rather, the passage simply discloses that the system will be set to the known users preferences until the system determines that a new known user is using the system at which time the system will be set to the new known users preferences. Fig 3 and the description at col. 9, lines 10-60 further define step 220 and clearly support the Applicants argument that the users of the *Williams et al.* '964 system are known. As further support that the users in *Williams et al.* '964 are known, the Applicant points the Examiner to *Williams et al.* (U.S.P. 5,945,988) which is the parent of the *Williams et al.* '964 patent. Claim 22 of the *Williams et al.* '988 patent clearly recites "known entertainment system users".

The Applicant submits that the Examiner is clearly reconstructing the prior art with the hindsight of the current invention as the *Williams et al.* '964 reference clearly does not teach the retrieval and application of heuristic rules as recited in claim 52 by clear disclosure or by the principles of inherency as required to assert a prima facie case of anticipation. That is, there is *no* disclosure in *Williams et al.* '964 of heuristic rules and the heuristic rules are clearly not inherent as other possibilities exist and are actually disclosed in *Williams et al.* '964. For at least the reasons disclosed above, the Applicant submits that claim 52 is clearly patentable over the cited references. Claims 53-69 depend from claim 52 and are submitted to be patentable over the prior art for at least the reasons addressed with respect to claim 52 and for the further features recited therein. The rejection of claims 52-69 accordingly should be withdrawn.

Independent claims 70, 74, 75 and 79 recite features that are similar to those recited in claim 52. As such it is submitted that claims 70, 74, 75 and 79 are patentable over *Williams et al.* '964 for at least similar reasons to those advanced above with respect to claim 52. Moreover, claims 71-73, 76-78 and 80-82 depend from claims 70, 75 and 79 respectively. These claims are submitted to be patentable over *Williams et al.* '964 for at least the reasons described with respect to the independent claims and for the further features recited therein. As such, the rejection of claims 70-82 accordingly should be withdrawn.

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Newly added independent claim 83 is directed to a method for generating a subscriber profile. The method includes retrieving heuristic rules associated with interaction traits, wherein the heuristic rules predict non-interaction traits about the subscriber and the non-interaction traits are not limited to child/adult distinctions. Initially the Applicant submits that *Williams et al. '964* clearly do not disclose, or suggest, heuristic rules associated with interaction traits that predict non-interaction traits (as discussed above with respect to claim 52). Moreover, *Williams et al. '964* clearly do not disclose or suggest non-interaction traits not being limited to child/adult distinctions and the Examiner does not contend that *Williams et al. '964* discloses this limitation. In fact, in the Office Action (i.e., page 2, line 15 -- page 3, line 4) the Examiner asserts that *Williams et al. '964* must disclose heuristic rules in order to determine whether the user is a child or adult (i.e., simple child/adult distinction). Thus, even assuming arguendo that the Examiner's assertion is correct, the reference does not disclose or suggest the invention as recited in claim 83. Claims 84-96 depend from claim 83 and are submitted to be patentable over the cited references for at least the reasons discussed with respect to claim 83 and for the further features recited therein. Accordingly, the Applicant submits that claims 83-96 are patentable over the cited reference.

Newly added independent claim 97 is directed to a method for generating a subscriber profile. The method includes generating the subscriber profile by applying the heuristic rules to the interaction traits, wherein the subscriber profile is not limited to child/adult distinctions, advertising associated with children or advertising associated with adults. The Applicant submits that *Williams et al. '964* clearly do not disclose a subscriber profile as recited in claim 97. Accordingly claim 97 is submitted to be patentable over the cited references.

Newly added independent claim 98 is directed to a method for generating a subscriber profile. The method includes retrieving heuristic rules associated with the interaction traits, wherein the heuristic rules predict non-interaction traits about the subscriber, the non-interaction traits including at least some subset of gender, income level and family size. The Applicant submits that *Williams et al. '964* clearly do not disclose heuristic rules as recited in claim 98. Accordingly claim 98 is submitted to be patentable over the cited references.

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Newly added independent claim 99 is directed to a method for generating a subscriber profile. The method includes retrieving heuristic rules associated with the interaction traits, wherein the heuristic rules associate the interaction traits to non-interaction traits, the interaction traits to non-interaction traits associations including at least some subset of channel change speed to gender, channel change speed to income level, program genre to gender, program genre to income level, and program genre to family size. The Applicant submits that *Williams et al.* '964 clearly do not disclose heuristic rules as recited in claim 99. Accordingly claim 99 is submitted to be patentable over the cited references.

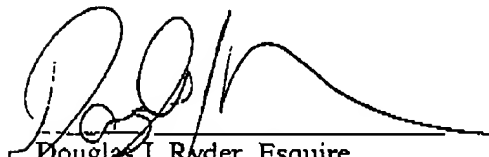
### Conclusion

For the foregoing reasons, Applicant respectfully submits that claims 52-99 are in condition for allowance. Accordingly, early allowance of claims 52-99 is earnestly solicited.

If the Examiner believes that a conference would be of value in expediting the prosecution of this Application, the Examiner is hereby invited to contact the undersigned attorney to set up such a conference.

If the Examiner does not consider the claims to be allowable, the Applicant requests that the Examiner contact the undersigned to discuss prior to issuing a formal Action.

Respectfully submitted,

  
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